

**Agency: Commerce, Community and Economic Development****Grants to Municipalities (AS 37.05.315)****Grant Recipient: Matanuska-Susitna Borough****Project Title:**

# Matanuska-Susitna Borough - Port MacKenzie Rail Extension

**State Funding Requested: \$ 67,000,000**

Future Funding May Be Requested

**House District: Mat-Su Areawide (13-16)****Brief Project Description:**

Project consists of constructing a rail extension that will connect the Alaska Railroad's mainline track to Port MacKenzie.

**Funding Plan:****Total Cost of Project: \$285,000,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
State Funds	\$10,000,000	2007				
Other					\$208,000,000	
Total	\$10,000,000				\$208,000,000	

**Detailed Project Description and Justification:**

Project consists of constructing a rail extension that will connect the Alaska Railroad's mainline track to Port MacKenzie.

**Project Timeline:**

The EIS is underway and scheduled to be completed by March 2009. The project could be completed by 2012 if funding is available.

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

Alaska Railroad & Mat-Su Borough

**Grant Recipient Contact Information:**

Contact Name: John Duffy, Borough Manager

Phone Number: (907) 745-9689

Address: 350 E. Dahlia Ave, Palmer, AK 99645

Email: jduffy@matsugov.us

Has this project been through a public review process at the local level and is it a community priority? ☒ Yes ☐ No



# Port MacKenzie Rail Extension



## PROJECT FACTS

### Project Scope

The Matanuska-Susitna Borough (MSB) and the Alaska Railroad Corporation (ARRC) jointly propose construction and operation of a new rail line to connect the Borough's Port MacKenzie to ARRC's rail system.

The port lies about 30 miles southwest of Wasilla and about 5 miles due north of Anchorage, across Cook Inlet. Depending on the route selected, the project would involve 30 to 45 miles of new rail line extending from Port MacKenzie to the Alaska Railroad's mainline at some point between Meadow Lakes and north of Willow.

Port MacKenzie has a deep draft dock that requires no dredging and can serve the world's largest ships (Panamax and Cape Class vessels). The port's 8,940 upland acres and 1,300 tideland acres provide ample room to accommodate bulk resource storage, transport and processing facilities, as well as rail and terminal facilities for efficient train loading and unloading.

The project includes completion of an environmental study/document (either an Environmental Impact Statement, EIS, or an Environmental Assessment, EA) as required by the National Environmental Policy Act (NEPA). This work includes identifying and analyzing feasible alignment alternatives, completing preliminary engineering design on alternatives, estimating anticipated construction costs, and determining the project's economic, financial and engineering feasibility.

When the environmental document, design and construction are complete, the new rail line would operate as part of the Alaska Railroad system.

### Project Benefits

- The rail line would maximize Port MacKenzie's potential as a bulk resources export and import facility.
- The port's proximity to other Interior Alaska natural resources offers a more economical transportation alternative that could promote development of such strategic minerals as molybdenum, zinc, copper, lead and limestone.
- Railbelt communities would benefit from newly stimulated natural resource development and rail freight activity through increased employment, contributions to state and community tax base, and overall economic health.
- With room for layout and storage, Port MacKenzie would be an ideal site to supply materials for pipeline and other construction projects.

### Project Status & Timeline

- In 2007, the Alaska State Legislature appropriated \$10 million to complete the environmental document and related studies.
- In June 2007, ARRC and MSB signed a Memorandum of Agreement to pursue environmental work, engineering and alternative analysis in support of the Surface Transportation Board (STB)-led environmental document for a Port MacKenzie rail line extension.
- The timing of this project is currently tied to rail transport for the proposed Agrium



Kenai Coal Gasification (KCG) project, which requires that the rail extension be operational by 2012. If the rail extension timing remains tied to the KCG project, the environmental study, engineering, design and construction activities must follow a tight schedule:

- NEPA Environmental Study Completion / Identify Funding: 2007-2009
  - Project Final Design: 2008-2009
  - Construction: 2009-2011
  - Operation: 2011-2012
- Two contracts have been awarded to complete preliminary engineering and preliminary environment studies to support the NEPA environmental document development. Public involvement is included as part of the environmental study contract.

## Project Participants

- **Matanuska-Susitna Borough (MSB)** – MSB is the local government that owns the Port MacKenzie land and facility. The Mat-Su Borough is the project's Sponsor, responsible for financial and public/government relations oversight and land use planning. MSB will co-manage the project.
- **Alaska Railroad Corporation (ARRC)** – ARRC is a self-sustaining corporation owned by the State of Alaska. The Alaska Railroad is the project's Applicant, responsible for rail-related technical expertise, and preparation and submittal of documents to the STB in support of the NEPA environmental document effort. ARRC will co-manage the project.
- **Surface Transportation Board (STB)** – STB is the lead federal agency on the project. Because the project involves new rail line construction requiring federal approval, an environmental document will be prepared to meet NEPA requirements. The STB, through its Section of

Environmental Analysis (SEA) will be responsible for preparing the environmental document.

## Cost and Funding

- The State appropriated \$10 million during the 2007 legislative session to support the STB's process for achieving a license for constructing and operating the rail line. This includes alternative analysis, preliminary engineering, NEPA environmental documentation and a financial feasibility study.
- Final design and construction of a rail spur to Port MacKenzie is estimated to cost \$300 million. The Mat-Su Borough and Alaska Railroad will jointly conduct a financing study to assess options for funding the project.

## For More Information

### Mat-Su Borough:

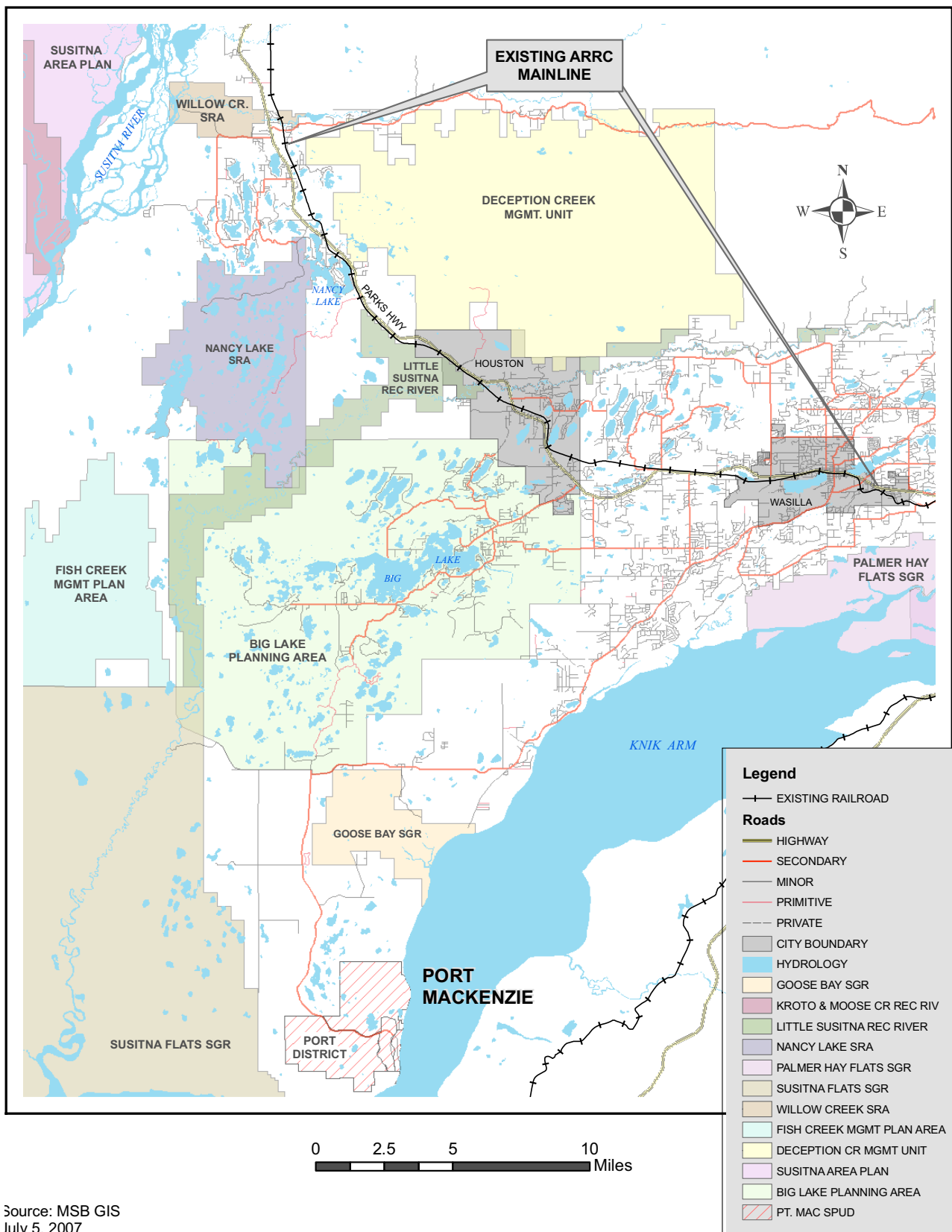
- Public Affairs Director Patty Sullivan at 907.745.9577

### Alaska Railroad:

- Public Involvement Officer Stephenie Wheeler 907.265.2671



Matanuska-Susitna Borough  
PORT MACKENZIE RAIL EXTENSION PROJECT: VICINITY MAP



Source: MSB GIS  
July 5, 2007



# Benefit-Cost Assessment of the Port McKenzie Rail Extension

prepared by:  
Steve Colt and Nick Szymoniak  
Institute of Social and Economic Research  
10 March 2008

## Costs

We assume that the Port McKenzie rail extension would cost \$275 million to construct.<sup>1</sup> This is a conservative estimate based on a range of between \$210 million and \$295 million for different route options. O&M costs are assumed to be \$1.5 million per year. The time horizon runs 50 years from 2012 to 2061. The net present value of all costs is \$301.1 million.

## Benefits

The rail extension would provide two distinct types of benefits: 1) It reduces the cost of rail transportation; and 2) It is likely to stimulate significant new mines and other major development. These benefits come from a diverse mix of potential projects – thus **a strength of the rail extension is that its economic viability does not depend on any one project.**

### Reduced transportation costs.

Relative to Seward, using the extension would save 140.7 miles per one-way trip.<sup>2</sup> Assuming an average cost savings of 6 cents per ton-mile and a 5.0% real discount rate,<sup>3</sup> we estimate that **using the extension would save \$648 million in avoided rail costs, avoided port costs, and avoided railroad and road upgrades.** These savings are shown in the following table.

	Tons per year	Years of operation	Benefits from reduced rail and port cost NPV at 5%		Notes
Usibelli Coal	1,000,000	2012 - 2061	\$	152,292,784	
Gas pipeline materials	N/A	2013 - 2015	\$	101,484,644	1
Ore from new mines	3,558,750	2017 - 2056	\$	144,786,021	2
Coal to Agrium	4,000,000	2012 - 2061	\$	114,380,371	
Cement plant	1,095,000	2020 - 2061	\$	99,358,093	3
Misc commodities	250,000	2012 - 2061	\$	35,725,880	4
<b>Total benefits</b>			\$	<b>648,027,793</b>	
<b>Benefit / Cost ratio from transportation savings</b>				<b>2.2</b>	

- Notes:
1. Gas pipeline savings includes \$82 million of avoided rail and road upgrade costs
  2. Mines would commence operation in various years; the tonnage in this table is peak production reached after 2037.
  3. Assumes a 3,000 tons per day output shipping to tidewater for export.
  4. Assumes a combination of gravel, wood chips, additional fuel imports to meet growing demand, and other miscellaneous bulk commodities.

In addition to the above, we estimate that between 1,200 and 2,200 crossings of Pittman Road and other roads would be avoided by the extension, saving motorists up to **120,000 hours** of travel time delay between now and 2061.

<sup>1</sup> AK Railroad submission to Federal Surface Transportation Board requesting license to build rail extension. January 2008.

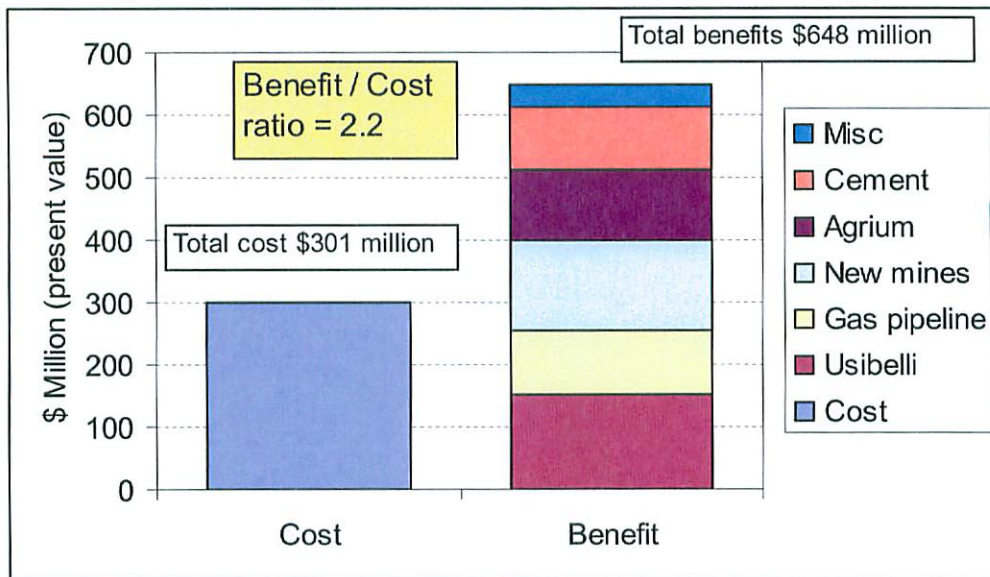
<sup>2</sup> Paul Metz, Economic Analysis of Rail Link Port MacKenzie to Willow, Alaska. February 2007

<sup>3</sup> "real discount rate" means adjusted for inflation. This rate is based on the real rate of return from the Alaska Permanent Fund.



## Benefits of Port McKenzie rail extension from reduced transportation costs

(Present value @ 5.0%; does not include motorist time savings)



### Economic development from new mineral activity

According to a detailed analysis by Paul Metz,<sup>4</sup> the rail extension would provide a significant stimulus to new mineral developments within a 120-mile wide corridor surrounding the existing Railbelt. Metz projects likely minerals development with a gross metal value of \$327 billion. This value would generate taxes and royalties to the State of Alaska starting at \$42 million per year (in 2017) and increasing to \$543 million per year in 2027 and to \$1.1 billion per year after 2037. In addition these developments could generate up to \$3 billion per year in additional economic activity in Railbelt communities.

### Direct fiscal return to State of Alaska

Because much of the savings from reduced rail transportation costs would flow through to increased taxable income, we estimate that direct annual fiscal returns to the State of Alaska would have a present value of between \$110 million (tied to rail cost savings) and \$6.3 billion (including all mineral revenues from new mines). These break down as follows:

- Between \$1 million and \$4 million per year in additional corporate income taxes and oil and gas revenues, with a present value of \$68.5 million
- A direct saving to the state of \$41.2 million from avoided railroad and road upgrades<sup>5</sup>
- Assuming new mineral development and attributing it to the rail extension, \$42 million per year increasing to \$1.1 billion per year from mining license fees, royalties, and corporate income taxes. The present value of all these mineral revenues is \$6.2 billion.

### Conclusion

This project provides a benefit/cost ratio ranging from 2.2 (based only on transportation cost savings) up to about 50 (based on additional mineral activity). In addition, there will be community benefits (jobs and income) that we have not explicitly considered here. These are extraordinarily good returns on an infrastructure investment in Alaska.<sup>6</sup>

<sup>4</sup> Paul Metz, Economic Analysis of Rail Link Port MacKenzie to Willow, Alaska. February 2007.

<sup>5</sup> Assumes that the state would pay half of these upgrades and pipeline builders would pay half.

<sup>6</sup> By comparison, the Bradley Lake hydroelectric project now appears to have a B/C ratio of less than 1.5, even when based on high and rising natural gas prices. Most public projects in Alaska have not been subjected to formal cost-benefit analysis.





# RESOURCE DEVELOPMENT COUNCIL

Growing Alaska Through Responsible Resource Development

March 7, 2008

Mr. John Duffy, Borough Manager  
Matanuska-Susitna Borough  
350 E. Dahlia Avenue  
Palmer, AK 99645

Dear Mr. Duffy:

The Resource Development Council (RDC) is writing to support the Port MacKenzie Rail Expansion, connecting the port to existing Alaska Railroad track in the Matanuska-Susitna Borough.

RDC is a statewide business association comprised of individuals and companies from Alaska's oil and gas, mining, forest products, tourism, and fisheries industries. RDC's membership includes Alaska Native corporations, local communities, organized labor, and industry support firms. RDC's purpose is to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources.

The expansion of rail in the Matanuska-Susitna valley to connect to Port MacKenzie would extensively promote resource development, in both the region and statewide. Transportation of materials, shipment of commodities, and delivery of fuel are all areas of significant cost to many businesses and communities in our state. Improving transportation routes can dramatically reduce these costs to enable responsible resource development while achieving maximum economic benefit. Moreover, track expansion will create exciting new opportunities and promote expansion of current projects, all of which provide jobs to Alaskans, stimulate the economy, and provide needed funding for our government.

Additionally, the connection of Port MacKenzie with the railroad will increase traffic and usage of the port. While other area ports remain overwhelmed and congested, the deeper waters of Port MacKenzie can accommodate large vessels and, with a railroad at port site, deliver supplies to the outlying areas.

Thank you for the opportunity to support this important project.

Sincerely,

Jason Brune  
Executive Director

Founded 1975

Executive Director

Jason W. Brune

2007-2008 Executive Committee

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Wendy Lindscoog, Vice President

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121 West Fireweed, Suite 250, Anchorage, Alaska 99503-2035

Phone: 907/276-0700 Fax: 907/276-3887 Email: Resources@akrdc.org Website: www.akrdc.org



# ALASKA MINERS ASSOCIATION, INC.

3305 Arctic Blvd., #105, Anchorage, Alaska 99503 • (907) 563-9229 • FAX: (907) 563-9225 • [www.alaskaminers.org](http://www.alaskaminers.org)

Matanuska-Susitna Borough

February 28, 2008

Mr. John Duffy  
Borough Manager  
Matanuska-Susitna Borough  
350 E. Dahlia Ave.  
Palmer, Alaska 99645-6488

FAX 907-745-9669.

FEB 29 2008

Administration/  
Human Resources

Dear Mr. Duffy,

I am writing to encourage the Matanuska-Susitna Borough in its efforts to make a rail connection from the Alaska Railroad mainline to the Point MacKenzie port site. I understand that the Mayors of the Fairbanks Northstar Borough, the Denali Borough and the Matanuska-Susitna Borough are requesting that \$67 million for this rail extension project be included in the Fiscal Year 2009 budget. The Alaska Miners Association supports this funding request and the completion of this rail extension.

The Alaska Miners Association is a non-profit membership organization established in 1939 to represent the mining industry. The AMA is composed of more than 1000 individual prospectors, geologists and engineers, vendors, suction dredge miners, small family mines, junior mining companies, and major mining companies. Our members look for and produce gold, silver, platinum, diamonds, lead, zinc, copper, coal, limestone, sand and gravel, crushed stone, armor rock, etc. Our members live and work throughout the state and many have projects that may benefit from the extension of the Alaska Railroad to the Point MacKenzie port site.

A rail connection to the Point MacKenzie port site will provide a significantly better port alternative for many mineral projects than is available at this time. I anticipate that some mineral projects that may not be economic at this time will become economically viable in the future because of the rail access to this port. I believe that the same can be said for wood fiber production from interior Alaska. Both minerals and wood fiber are bulk commodities and the transportation and trans-shipment costs for these will often be the deciding factor that determines whether a project goes forward.

If there is anything that the Alaska Miners Association can do to support your efforts to see this rail connection come to fruition please let us know.

Sincerely,

Steven C. Borell, P.E.  
Executive Director

Cc: Mr. Pat Gamble





## Parks Highway Coalition

February 26, 2008

Governor Sarah Palin  
President of the Senate Lyda Green  
Speaker of the House John Harris

Together, we strongly support the Port MacKenzie Rail Extension.

These 30- to 45-miles of new track from the Alaska Railroad's mainline to Port MacKenzie are clearly among the state's most promising, economic development opportunities.

Regionally, the extension will stimulate expansion of the mining industry, provide for less expensive fuel delivery, and support creation of significant new industries such as coal gasification and cement production.

The new rail line stimulates mining production in the Interior, potentially producing a combined gross metal value of \$327 billion over 40 years. The project will enable the export of lime from a 1.6 billion ton limestone deposit north of Fairbanks; providing the opportunity for cement production. Our nation presently imports cement, yet Alaska could supply 5% of those needs when this rail line is built.

Benefits to the state run deep. Three new mines are expected to provide up to \$18 billion in revenues to the state through mining taxes, corporate taxes, and royalties. The rail extension will give a \$100 million boost to the most important project of our time: the natural gas pipeline. That's true because the rail extension will reduce the transport cost of pipe and pipeline materials, resulting in a savings of some \$100 million in gas pipeline construction costs.

Accordingly, the three Mayors of the Fairbanks North Star Borough, the Denali Borough and the Matanuska-Susitna Borough ask that \$67 million be included in this year's capital budget for Phase I design work for the rail extension. This will continue project funding that began last year with the \$10 million appropriated for environmental work.

The benefits to the Alaska economy in terms of state tax receipts, state royalties, new jobs, and new businesses will more than pay for the investment.

Thank you for your consideration.

Sincerely,



\_\_\_\_\_  
Jim Whitaker, Mayor  
Fairbanks North Star Borough



\_\_\_\_\_  
Dave Talerico, Mayor  
Denali Borough



\_\_\_\_\_  
Curt Menard, Mayor  
Matanuska-Susitna Borough

cc: State Legislature

# Environmental analysis for Mat-Su rail line underway

By Tim Bradner  
Alaska Journal of Commerce

An environmental analysis of a proposed extension of the Alaska Railroad to build a rail spur to a bulk commodities dock at Port MacKenzie is on a fast track and is due to be completed next year, Matanuska-Susitna Borough Manager John Duffy said.

The Surface Transportation Board, a federal agency that oversees expansions of the U.S. rail network, is managing an environmental impact statement for the project and has retained ICF International, a transportation consulting firm, to do the study.

Duffy said the Mat-Su Borough will soon issue a request for proposals for a contract to assist the borough in developing a strategy to finance the project, which is expected to cost between \$210 million and \$295 million. The cost will depend largely on which route is selected of three being studied, Duffy said.

The borough is also asking the state Legislature for a \$67 million capital appropriation to begin initial engineering and right-of-way work if the results of the EIS are favorable. If the appropriation is made, the amount of money that will have to be raised through financing will be less by that amount.

The Legislature last year appropriated \$10 million to pay for the EIS process that is now underway.

Meanwhile, a new study prepared for the borough by the Institute of Social and Economic Research at the University of Alaska Anchorage shows substantial economic benefits and savings in shipping costs.

In a report given to the borough March 10, ISER researchers Steve Colt and Nick Szymoniak estimated \$648 million in economic benefits over 50 years. That includes a \$101.4 million savings in shipping materials and equipment for natural gas pipeline construction.

Colt and Szymoniak calculated a benefit/cost ratio of 2.2 for the project, which means the rail extension would deliver more than double the economic benefits over time, adjusted for inflation, than the costs of building and maintaining the rail extension.

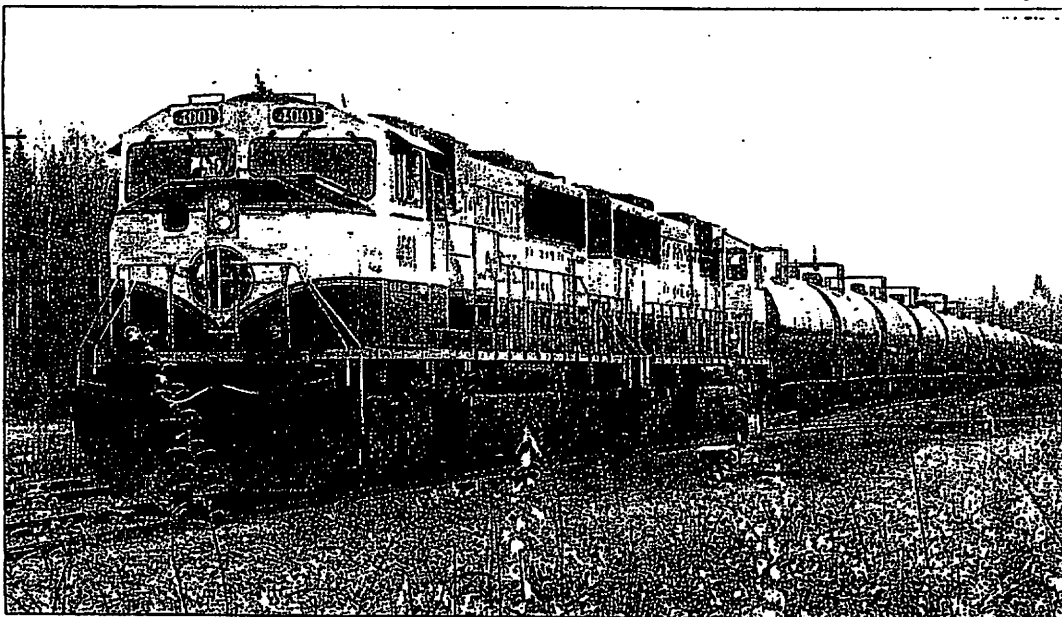
While the procedure is common with federal projects, most public projects in Alaska have not been subject to formal cost-benefit analysis, Colt and Szymoniak wrote in the ISER report.

Since the analysis was prepared, Agrium Corp. announced that it would not construct a large coal gasification project at its ammonia and urea fertilizer plant in Nikiski. Colt and Szymoniak had assumed that coal for the gasification project would be carried over the rail spur.

But even without the coal, the project still nets a benefit/cost ratio of 1.77, meaning it will generate substantially more benefits than costs over time.

This compares favorably with other major public infrastructure projects that have been built in Southcentral Alaska.

"By comparison, the Bradley Lake hydroelectric project now appears to have a benefit/cost ratio



An Alaska Railroad train hauls fuel tanks. An environmental assessment is currently underway to review the potential of building a rail spur to a bulk commodities dock at Port MacKenzie in the Matanuska-Susitna Valley.

For Photos See Supplement/ABC

of less than 1.5, even when based on high and rising natural gas prices," Colt and Szymoniak wrote.

Bradley Lake is a 250-megawatt hydro project built by the state in the 1980s on the Kenai Peninsula near Kachemak Bay. It was aimed at diversifying the sources of electrical generation for the Southcentral-Interior power grid, and today it is generally viewed as having been a sound investment.

The ISER analysis assumed a capital cost of \$275 million for the spur line. Operations costs are assumed to be \$1.5 million per year, and the assumption of time is 50 years, from the potential completion date of 2012 to 2061. The net present value of all costs, with a discount rate of 5 percent (which adjusts for inflation) is \$301.1 million.

Compared to shipping supplies by rail to and from Seward, using a rail spur to Port MacKenzie would save 140.7 miles per one-way trip, for an average cost-savings of 6 cents

per ton-mile, according to the report.

There are also avoided costs in the calculation for upgrades needed in the future for road crossings, bridges and ports if the rail spur is not built. That becomes more meaningful if construction of a gas pipeline occurs.

The benefits from reduced transportation and the avoided costs total \$648 million, also discounted at 5 percent for inflation, which produces the 2.2 benefit/cost ratio calculated by Colt and Szymoniak.

Coal to Agrium amounted to \$114.38 million of this savings, however (the alternative would be shipping coal to Agrium through the Port of Anchorage), and subtracting this results in total benefits being reduced to \$533.7 million.

"The rail extension would provide two distinct types of benefits. First, it reduces the cost of rail transportation, and two, that it is likely to stimulate significant new

mines and other major developments," Colt and Szymoniak wrote in the ISER report. "A strength of the rail extension is that its economic viability does not depend on any one project."

The Mat-Su Borough's request for a \$67 million capital appropriation has brought support from the Fairbanks North Star and the Denali boroughs.

"The new track from the Alaska Railroad's main line to Port MacKenzie are clearly among the state's most promising economic development opportunities. Regionally, the extension will stimulate expansion of the mining industry, provide for less expensive fuel delivery and support creation of significant new industries," Fairbanks North Star Borough Mayor Jim Whitaker and Denali Borough Mayor Dave Thierico wrote in a letter to state legislators that was also signed by Mat-Su Borough Mayor Curt Menard.

One potential new industry is cement production, which could result if limestone deposits in the Interior can be developed because of less expensive rail transportation.

"The (rail spur) project will enable the export of lime from a 1.6-billion-ton limestone deposit north of Fairbanks, providing the opportunity for cement production. Our nation currently imports cement," Whitaker, Thierico and Menard wrote.

Lower transportation costs with the rail spur to Port MacKenzie would also make coal from the Usibelli coal mine in Healy more competitive in Pacific markets. Usibelli now exports coal to Asia and Latin America, as well as supplies coal-fired power plants in Interior Alaska. Having to transport the coal through Anchorage to an export terminal in Seward adds costs that could be avoided if the coal could be exported through the Port MacKenzie dock, which has bulk-loading equipment.